

Bullitt County Public Schools

Energy Management Program





Step 1: Make a Commitment

- Energy Manager to Guide the Program
- Created a District Energy Team
 - Maintenance
 - District Technology Coordinator
 - Custodial Representative
 - Teachers
 - Principal
- Instituted an Energy Plan
 - Approved by Board
- Became an Energy Star Partner



Step 2: Assess Performance & Opportunities

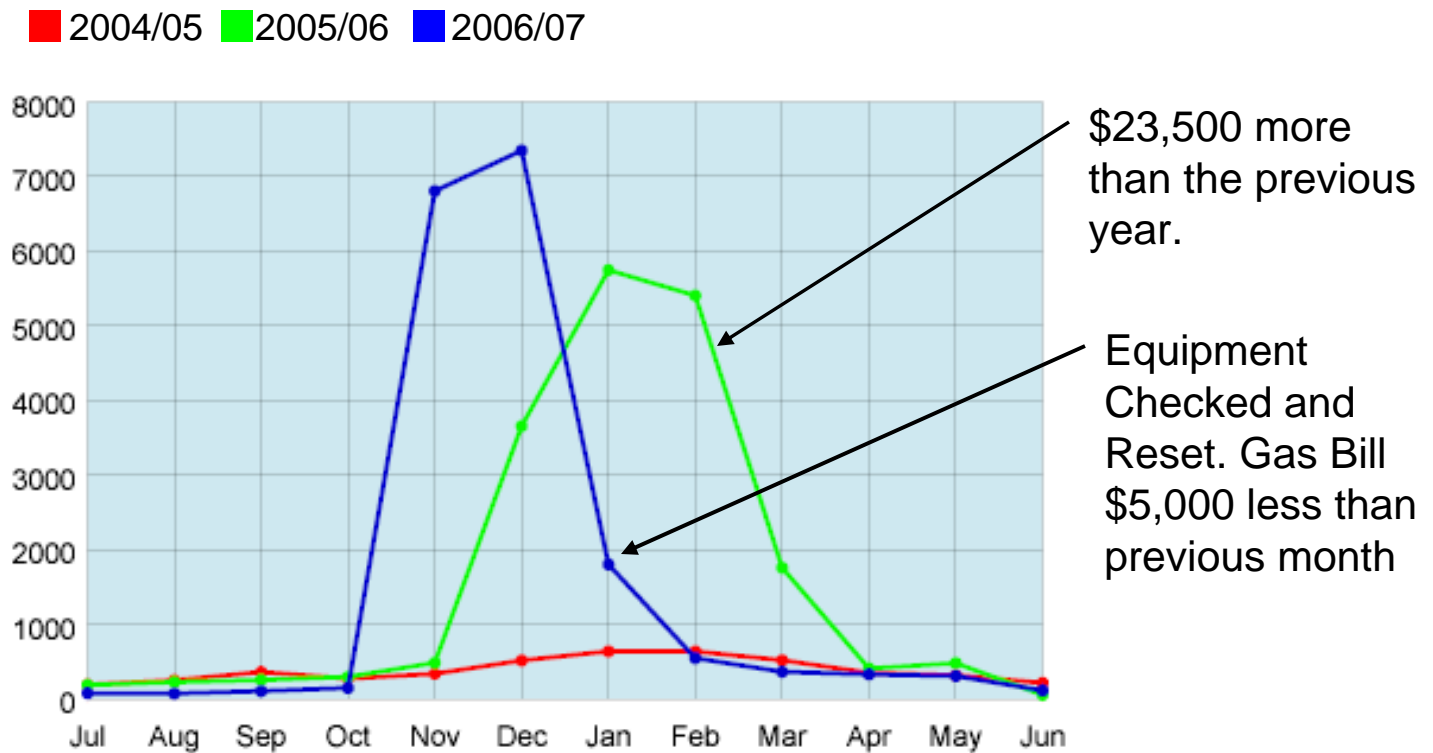
- Energy Tracking and Accounting
- Building Energy Audits
 - Evaluate:
 - Lighting
 - Plug Loads
 - HVAC Equipment
 - Kitchen Equipment
 - Building Envelope



Energy Tracking and Accounting

- Database tracking over 115 electric, gas and water meters
- Check for Billing Errors and Unused Meters
 - \$11,900 of credits to accounts
 - \$11,000 of future avoided costs
- Make Sure Accounts are on Appropriate Rates
 - Hebron, Central Office, and Bullitt Lick. Combined, these changes will save approximately **\$17,900** annually.
- Compare Energy Usage to Other Schools (kBtu/SF)

You Can't Manage What You Don't Monitor



Elementary School Natural Gas Usage



Step 3: Set Goals

- Identify Low/No Cost Measures
 - HVAC and Controls
 - Lighting
 - Behavioral Changes/Conservation
 - Establish Energy Teams in Schools
- Identify Capital Improvement Measures
 - Performance Contract
 - Lighting, Upgrade Controls, Efficient HVAC Equipment



Steps 4 & 5: Create and Implement Action Plan

- Items to Address by Building/Maintenance Staff/Energy Manager
 - Time Clocks, Programmable Thermostats, Exhaust Fans
 - Exit Signs
 - Incandescent to Compact Fluorescent Light Bulbs
 - Remove Bulbs from Vending Machines
- Performance Contract
 - Phase I wrapping up

Steps 4 & 5: Create and Implement Action Plan (continued)

■ Raise Awareness

- Initial Memo Sent District Wide
- Shut-down Checklists Before Each Break
- Website
- Mascot Contest
- Energy Star Change a Light Campaign
- Regular Energy Walkthroughs
 - Meet with Principals and Custodians

■ Encourage Schools to Start Energy Teams

- Workshops
- District Awards Program



Student Energy Teams

Address  <http://teacherwebs.bullittschools.org/Green.Team/page.asp?id=61>

Green team

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about us

We are the MWMS Green Team, also known as the Energy Watch Dogs. Our team is a group of students from Team 007. We are led by our science teacher, Mrs. Carver. Every classroom has been supplied with recycling bins. We also conduct secret audits to test how well teachers and students are conserving energy. This will help our school save money. We are doing a plug-load study to see how much energy each computer and other electronics use.

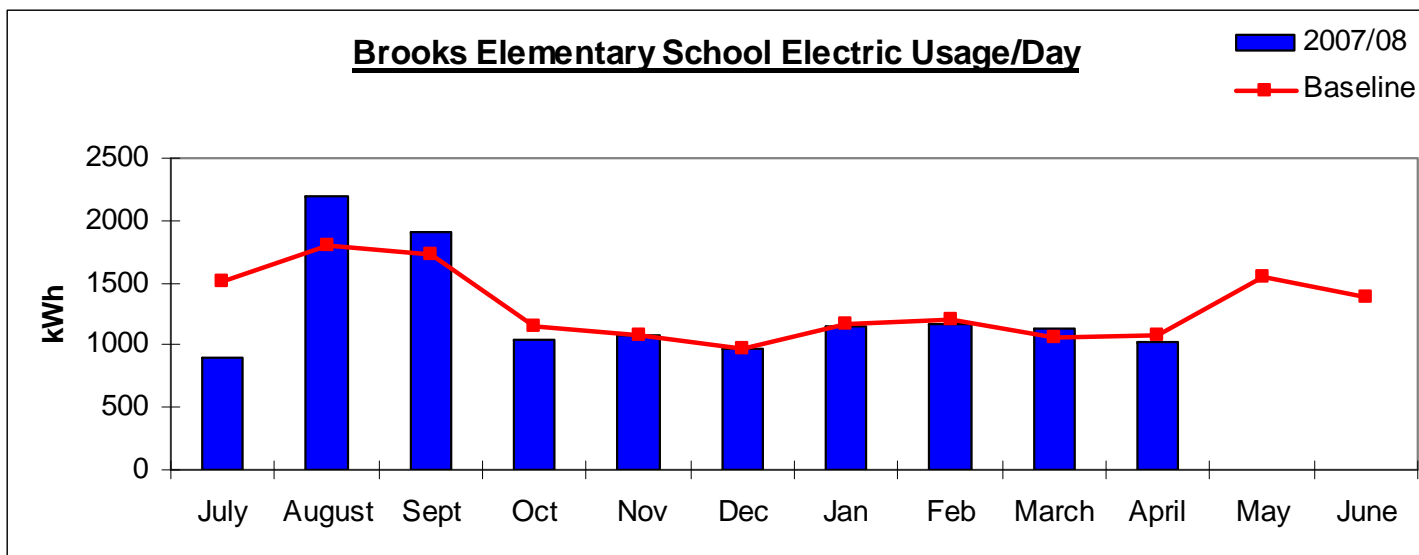




Steps 6 & 7: Evaluate Progress and Recognize Achievement

- Track Utility Usage Monthly
- Revise Energy Plan and Action Plan as Needed
- Recognize Individual School Successes
- Apply for Recognition Through Energy Star's Portfolio Manager
- Encourage Schools to Get Involved with NEED or Green & Healthy Schools Program

Brooks Electric Usage/Day (kWh/Day)				Weather Data			
Month	2007/08	% Change from Baseline	Baseline	2007/08		Baseline	
				CDD	HDD	CDD	HDD
July	904	-40%	1519	397	0	429	0
August	2200	23%	1793	629	0	389	5
Sept	1899	10%	1732	350	3	218	17
Oct	1035	-9%	1143	149	107	47	167
Nov	1076	-1%	1087	2	443	4	436
Dec	979	1%	973	0	712	0	910
Jan	1152	-2%	1171	2	935	0	853
Feb	1170	-3%	1209	0	776	0	703
March	1133	6%	1067	0	558	9	541
April	1030	-5%	1087	30	237	39	205
May			1546	0	0	164	68
June			1391	0	0	352	0
Average	1258	-4%	1310			1648	3902





Program Success

- Energy/Green Teams at 13 Schools
- Improved Energy Conservation Behaviors and Attitudes
- Portfolio Manager Stats: Overall Average Energy Reduction of 11.8%, Average Score increased from 29 to 41.
- Financial (2007/08)
 - Electricity - \$180,000
 - Natural Gas - \$26,000
 - TOTAL - Over \$206,000 in Avoided Costs!**

Questions?

